



ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R05-OAR-2010-0037; FRL-9622-8]

**Approval and Promulgation of Air Quality Implementation Plans;
Minnesota; Regional Haze**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to approve the Minnesota State Implementation Plan addressing regional haze for the first implementation period. Minnesota submitted its regional haze plan on December 30, 2009. A supplemental submission was made on January 5, 2012. The Minnesota regional haze plan addresses Clean Air Act (CAA) and Regional Haze Rule (RHR) requirements to remedy any existing and prevent future anthropogenic visibility impairment at mandatory Class I areas. We are proposing fully to approve the Minnesota regional haze plan if Minnesota submits its proposed Best Available Retrofit Technology (BART) emission limits for taconite facilities in fully adopted form prior to our final action under this proposal, or to conditionally approve the plan if Minnesota has not done so.

DATES: Comments must be received on or before **[insert date 30 days after publication in the Federal Register]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2010-0037, by one of the following methods:

1. www.regulations.gov: Follow the on-line instructions for submitting comments.
2. E-mail: blakley.pamela@epa.gov.
3. Fax: (312)692-2450.
4. Mail: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.
5. Hand Delivery: Pamela Blakley, Chief, Control Strategies Section, Air Programs Branch (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 AM to 4:30 PM, excluding Federal holidays.

Instructions: Direct your comments to Docket ID No.

EPA-R05-OAR-2010-0037. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or

otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional instructions on submitting comments, go to Section I of the SUPPLEMENTARY INFORMATION section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials

are available either electronically in www.regulations.gov or in hard copy at the Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is open from 8:30 AM to 4:30 PM, Monday through Friday, excluding Federal holidays. We recommend that you telephone Matt Rau, Environmental Engineer, at (312) 886-6524 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Matt Rau, Environmental Engineer, Control Strategies Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6524, rau.matthew@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document whenever "we," "us," or "our" is used, we mean EPA.

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I. What Should I Consider as I Prepare My Comments for EPA?

When submitting comments, remember to:

1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).
2. Follow directions - EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
4. Describe any assumptions and provide any technical information and/or data that you used.
5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
6. Provide specific examples to illustrate your concerns, and suggest alternatives.
7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.
8. Make sure to submit your comments by the comment period deadline identified.

II. What is the Background for EPA's Proposed Action?

A. The Regional Haze Problem

Regional haze is visibility impairment that is produced by a multitude of sources and activities located across a broad geographic area and that emit fine particles (PM_{2.5}) (e.g.,

sulfates, nitrates, organic particles, elemental carbon, and soil dust) and its precursors- sulfur dioxide (SO_2), nitrogen oxides (NO_x), and in some cases ammonia (NH_3) and volatile organic compound (VOCs). Fine particle precursors react in the atmosphere to form fine particulate matter. Aerosol $\text{PM}_{2.5}$ impairs visibility by scattering and absorbing light. Visibility impairment reduces the clarity and distance one can see. $\text{PM}_{2.5}$ can also cause serious health effects and mortality in humans and contributes to environmental effects such as acid deposition and eutrophication.

Data from the existing visibility monitoring network, the "Interagency Monitoring of Protected Visual Environments" (IMPROVE) monitoring network, show that visibility impairment caused by air pollution occurs virtually all the time at most national park and wilderness areas. The average visual range, the distance at which an object is barely discernable, in many Class I areas¹ in the western United States is 100-150 kilometers. That is about one-half to two-thirds of the visual

¹ Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the

range that would exist without anthropogenic air pollution. In the Eastern and Midwestern Class I areas of the United States, the average visual range is generally less than 30 kilometers, or about one-fifth of the visual range that would exist under estimated natural conditions. See 64 FR 35715 (July 1, 1999).

B. Requirements of the Clean Air Act (CAA) and EPA's RHR

In section 169A of the 1977 Amendments to the CAA, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes as a national goal the "prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I areas which impairment results from manmade air pollution." On December 2, 1980, EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources known as, "reasonably attributable visibility impairment" (RAVI). 45 FR 80084. These regulations represented the first phase in addressing visibility impairment. EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

responsibility of a Federal Land Manager. 42 U.S.C. 7602(i). When we use the term "Class I area," we mean a "mandatory Class I Federal area."

Congress added section 169B to the CAA in 1990 to address regional haze issues. EPA promulgated a rule to address regional haze, the RHR, on July 1, 1999 (64 FR 35713). The RHR revised the existing visibility regulations to integrate into the regulation provisions addressing regional haze impairment and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in EPA's visibility protection regulations at 40 CFR 51.300-309. Some of the main elements of the regional haze requirements are summarized in section III. The requirement to submit a regional haze state implementation plan (SIP) applies to all 50 states, the District of Columbia, and the Virgin Islands².

C. Roles of Agencies in Addressing Regional Haze

Successful implementation of the regional haze program will require long-term regional coordination among states, tribal governments, and various federal agencies. Pollution affecting the air quality in Class I areas can be transported over long distances, even hundreds of kilometers. Therefore, effectively addressing the problem of visibility impairment in Class I areas means that states need to develop coordinated strategies that take into account the effect of emissions from one jurisdiction

² Albuquerque/Bernalillo County in New Mexico must also submit a regional haze SIP to completely satisfy the requirements of section 110(a)(2)(D) of the CAA for the State of New Mexico under the New Mexico Air Quality Control Act (section 74-2-4).

on the air quality in another state.

EPA has encouraged the states and tribes to address visibility impairment from a regional perspective because the pollutants that lead to regional haze can originate from sources located across broad geographic areas. Five regional planning organizations (RPOs) were developed to address regional haze and related issues. The RPOs first evaluated technical information to better understand how their states and tribes impact Class I areas across the country and then pursued the development of regional strategies to reduce PM_{2.5} emissions and other pollutants leading to regional haze.

The RPO for Minnesota is the Central Regional Air Planning Association (CENRAP). CENRAP's membership includes the states of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Nebraska, Oklahoma, and Texas, along with tribes and federal land management agencies (FLMs).

Minnesota also worked with the Midwest RPO (MRPO) on technical analyses of regional haze and visibility in the Midwest. The MRPO member states are Illinois, Indiana, Michigan, Ohio, and Wisconsin.

D. The Relationship of the Clean Air Interstate Rule and the Transport Rule to Regional Haze Requirements

The Clean Air Interstate Rule (CAIR) required some states to reduce emissions of SO₂ and NO_x that contribute to violations of

the 1997 National Ambient Air Quality Standards (NAAQS) for PM_{2.5} and 8-hour ozone. 70 FR 25162 (May 12, 2005). CAIR established emissions budgets for SO₂ and NO_x. A 2006 EPA determination (71 FR 60612, October 13, 2006) establishes that states opting to participate in the CAIR program need not require BART for SO₂ and NO_x at BART-eligible electric generating units (EGUs). Many states relied on CAIR as an alternative to BART for SO₂ and NO_x for its subject EGUs.

On July 11, 2008, the D.C. Circuit issued its decision to vacate and remand both CAIR and the associated CAIR Federal Implementation Plans (FIPs) in their entirety. See *North Carolina v. EPA*, 531 F.3d 836 (D.C. Cir. 2008). However, the Court issued an order on December 23, 2008, remanding CAIR to EPA without vacating either CAIR or the CAIR FIPs in response to EPA's petition for rehearing. The Court held that, among other things, EPA had not properly addressed possible errors in analysis supporting the inclusion of Minnesota in CAIR for PM_{2.5}. The Court left the EPA CAIR rule and CAIR SIPs and FIPs in place until EPA replaces it with a rule consistent with the court's opinion. See *North Carolina v. EPA*, 550 F.3d at 1178. In a November 3, 2009 (74 FR 56721) final rule, EPA administratively stayed the effectiveness of CAIR and the CAIR FIP with respect to Minnesota and sources in Minnesota only.

EPA subsequently promulgated the Transport Rule, also known

as the Cross-State Air Pollution Rule, to replace CAIR. The final Transport Rule was published on August 8, 2011 (76 FR 48208). Minnesota is covered by the Transport Rule.

In the Transport Rule, EPA noted that it had not conducted a technical analysis at that time to determine whether compliance with the Transport Rule would satisfy the requirements of the RHR addressing alternatives to BART. EPA has since conducted such an analysis and proposed on December 30, 2011, that compliance with the Transport Rule will provide for greater reasonable progress toward improving visibility than source-specific BART controls for EGUs located in those states covered by the Transport Rule. 76 FR 82219. On that same day, the D.C. Circuit issued an order addressing the status of the Transport Rule and CAIR in response to motions filed by numerous parties seeking a stay of the Transport Rule pending judicial review. In that order, the D.C. Circuit stayed the Transport Rule pending the court's resolutions of the petitions for review of that rule in *EME Homer Generation, L.P. v. EPA* (No. 11-1302 and consolidated cases). The court also indicated that EPA is expected to continue to administer the CAIR in the interim until the court rules on the petitions for review of the Transport Rule.

On January 5, 2012, Minnesota submitted a draft supplement to its regional haze plan, including a statement that it wishes

to rely on the Transport Rule to satisfy BART requirements for SO₂ and NO_x for EGUs.

III. What Are the Requirements for Regional Haze SIPs?

Regional haze SIPs must assure reasonable progress towards the national goal of achieving natural visibility conditions in Class I areas, the reasonable progress goal (RPG). Section 169A of the CAA and EPA's implementing regulations require states to establish LTS for making reasonable progress toward meeting the RPG. Plans must also give specific attention to certain stationary sources that were in existence on August 7, 1977, but were not in operation before August 7, 1962, and require those sources to install BART reducing visibility impairment. The specific regional haze SIP requirements are discussed in further detail below.

A. Determination of Baseline, Natural, and Current Visibility Conditions

The RHR establishes the deciview (dv) as the principal metric or unit for expressing visibility impairment. This visibility metric expresses uniform proportional changes in haziness in terms of common increments across the entire range of visibility conditions, from pristine to extremely hazy conditions. Visibility expressed in deciview is determined by using air quality measurements to estimate light extinction and then transforming the value of light extinction using a logarithm

function. The deciview is a more useful measure for tracking progress in improving visibility than light extinction itself because each deciview change is an equal incremental change in visibility perceived by the human eye. Most people can detect a change in visibility at one deciview.³

The deciview is used in expressing RPGs, defining baseline, current, and natural conditions, and tracking changes in visibility. The regional haze SIPs must contain measures that ensure "reasonable progress" toward the national goal of preventing and remedying visibility impairment in Class I areas caused by anthropogenic air pollution. The national goal is a return to natural conditions such that anthropogenic sources of air pollution would no longer impair visibility in Class I areas.

To track changes in visibility over time at each of the 156 Class I areas covered by the visibility program (40 CFR 81.401-437) and as part of the process for determining reasonable progress, states must calculate the degree of existing visibility impairment at each Class I area at the time of each regional haze SIP is submitted and at the progress review every five years, midway through each 10-year implementation period. The RHR requires states with Class I areas (Class I states) to determine the degree of impairment in deciviews for the average of the 20

³ The preamble to the RHR provides additional details about the deciview. 64 FR 35714, 35725 (July 1, 1999).

percent (%) least impaired (best) and 20% most impaired (worst) visibility days over a specified time period at each of its Class I areas. Each state must also develop an estimate of natural visibility conditions for the purpose of comparing progress toward the national goal. Natural visibility is determined by estimating the natural concentrations of pollutants that cause visibility impairment and then calculating total light extinction based on those estimates. EPA has provided guidance to states regarding how to calculate baseline, natural, and current visibility conditions in documents titled, *EPA's Guidance for Estimating Natural Visibility conditions under the Regional Haze Rule*, September 2003, (EPA-454/B-03-005 located at http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf) (hereinafter referred to as "EPA's 2003 Natural Visibility Guidance") and *Guidance for Tracking Progress Under the Regional Haze Rule* (EPA-454/B-03-004 September 2003 located at http://www.epa.gov/ttncaaa1/t1/memoranda/rh_tpurhr_gd.pdf)) (hereinafter referred to as "EPA's 2003 Tracking Progress Guidance").

For the first regional haze SIP, due December 17, 2007, the "baseline visibility conditions" are the starting points for assessing "current" visibility impairment. Baseline visibility conditions represent the degree of visibility impairment for the 20% best days and 20% worst days for each calendar year from 2000

to 2004. Using monitoring data for 2000 through 2004, states are required to calculate the average degree of visibility impairment for each Class I area, based on the average of annual values over the five-year period. The comparison of initial baseline visibility conditions to natural visibility conditions indicates the amount of improvement necessary to attain natural visibility, while comparisons of future conditions against baseline conditions will indicate the amount of progress made. In general, the 2000 to 2004 baseline period is considered the time from which improvement in visibility is measured.

B. Determination of RPGs

The vehicle for ensuring continuing progress towards achieving the natural visibility goal is the submission of a series of regional haze SIPs from the states that establish two distinct RPGs, one for the best days and one for the worst days for every Class I area for each approximately 10-year implementation period. The RHR does not mandate specific milestones or rates of progress, but instead calls for states to establish goals that provide for "reasonable progress" toward achieving natural visibility conditions. In setting RPGs, a state with a mandatory Class I area (Class I state) must provide for an improvement in visibility for the worst days over the approximately 10-year period of the SIP and ensure no degradation in visibility for the best days.

Class I states have significant discretion in establishing RPGs, but are required to consider the following factors established in section 169A of the CAA and in EPA's RHR at 40 CFR 51.308(d)(1)(i)(A): (1) the costs of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of compliance; and (4) the remaining useful life of any potentially affected sources. The states must demonstrate in their SIPs how these factors are considered when selecting the RPGs for the best and worst days for each applicable Class I area. States have considerable flexibility in how they take these factors into consideration, as noted in EPA's *Guidance for Setting Reasonable Progress Goals under the Regional Haze Program*, ("EPA's Reasonable Progress Guidance"), July 1, 2007, memorandum from William L. Wehrum, Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, EPA Regions 1-10 (pp.4-2, 5-1). In setting the RPGs, states must also consider the rate of progress needed to reach natural visibility conditions by 2064 ("uniform rate of progress" or "glide path") and the emissions reduction needed to achieve that rate of progress over the approximately 10-year period of the SIP. In setting RPGs, each Class I state must also consult with potentially contributing states, i.e. those states that may affect visibility impairment at the Class I state's areas. 40 CFR 51.308(d)(1)(iv).

C. BART

Section 169A of the CAA directs states to evaluate the use of retrofit controls at certain older large stationary sources to address visibility impacts from these sources. Specifically, CAA section 169A(b)(2)(A) requires states to revise their SIPs to contain such measures as may be necessary to make reasonable progress towards the natural visibility goal including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate BART as determined by the state. The set of "major stationary sources" potentially subject to BART is listed in CAA section 169A(g)(7). The state can require source-specific BART controls, but it also has the flexibility to adopt an alternative such as a trading program only if the alternate provides greater progress towards improving visibility than BART.

On July 6, 2005, EPA published the *Guidelines for BART Determinations Under the Regional Haze Rule* at Appendix Y to 40 CFR Part 51 (BART Guidelines) to assist states in determining which of their sources should be subject to the BART requirements and in determining appropriate emission limits for each applicable source. A state must use the approach in the BART Guidelines in making a BART determination for a fossil fuel-fired EGU with total generating capacity in excess of 750 megawatts. States are encouraged, but not required, to follow the BART

Guidelines in making BART determinations for other sources.

States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are SO₂, NO_x, and PM. EPA has stated that states should use their best judgment in determining whether VOC or NH₃ emissions impair visibility in Class I areas.

States may select an exemption threshold value for their BART modeling under the BART Guidelines, below which a BART-eligible source may be considered to have a small enough contribution to visibility impairment in any Class I area to warrant being exempted from the BART requirement. The state must document this exemption threshold value in the SIP and must state the basis for its selection of that value. The exemption threshold set by the state should not be higher than 0.5 dv. Any source with emissions that model above the threshold value would be subject to a BART determination review. The BART Guidelines acknowledge varying circumstances affecting different Class I areas. States should consider the number of emission sources affecting the Class I areas at issue and the magnitude of the individual source's impact.

The state must identify potential BART sources in its SIP, described as "BART-eligible sources" in the RHR, and document its BART control determination analyses. In making BART

determinations, section 169A(g)(2) of the CAA requires the state to consider the following factors: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

A regional haze SIP must include source-specific BART emission limits and compliance schedules for each source subject to BART. The BART controls must be installed and in operation as expeditiously as practicable, but no later than five years after the date of EPA approval of the state's regional haze SIP. CAA section 169(g)(4); 40 CFR 51.308(e)(1)(iv). In addition to what is required by the RHR, general SIP requirements mandate that the SIP must also include all regulatory requirements related to monitoring, recordkeeping, and reporting for the BART controls on the source.

The RHR also allows states to implement an alternative program in lieu of BART if desired so long as the alternative program can be demonstrated to achieve greater progress toward the national visibility goal than implementing BART controls. EPA made such a demonstration for CAIR under regulations issued in 2005 revising the regional haze program. 70 FR 39104 (July 6, 2005). EPA's regulations provide that states participating in

the CAIR trading program under 40 CFR part 96 pursuant to an EPA-approved CAIR SIP or which remain subject to the CAIR Federal Implementation Plan (FIP) in 40 CFR part 97 need not require affected BART-eligible EGUs to install, operate, and maintain BART for emissions of SO₂ and NO_x. 40 CFR 51.308(e)(4). CAIR is not applicable to emissions of PM, so states were still required to conduct a BART analysis for PM emissions from EGUs subject to BART for that pollutant.

As described above in section II, the D.C. Circuit found CAIR to be inconsistent with the requirements of the CAA. The rule was remanded to EPA but left in place until the Agency replaced it. EPA replaced CAIR with the Transport Rule in August 2011.

On December 30, 2011, EPA proposed to find that the trading programs in the Transport Rule would achieve greater reasonable progress towards the national goal than would be obtained by implementing BART for SO₂ and NO_x for BART-subject EGUs in the area subject to the Transport Rule 76 FR 82219. Based on that proposed finding, EPA also proposed to revise the RHR to allow states to meet the requirements of an alternative program in lieu of BART by participation in the trading programs under the Transport Rule. The Transport Rule is not applicable to emissions of PM, so states would still be required to conduct a BART analysis for PM emissions from EGUs subject to BART for that

pollutant. EPA has not taken final action on that rule.

D. LTS

Consistent with the requirement in section 169A(b) of the CAA that states include in their regional haze SIP a 10 to 15 year strategy for making reasonable progress, section 51.308(d)(3) of the RHR requires that states include a LTS in their regional haze SIPs. The LTS is the compilation of all control measures a state will use during the implementation period of the specific SIP submittal to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all Class I areas within or affected by emissions from the state. 40 CFR 51.308(d)(3).

When a state's emissions are reasonably anticipated to cause or contribute to visibility impairment in a Class I area located in another state, the RHR requires the impacted state to coordinate with the contributing states in order to develop coordinated emissions management strategies. 40 CFR 51.308(d)(3)(i). In such cases, the contributing state must demonstrate that it has included in its SIP all measures necessary to obtain its share of the emission reductions needed to meet the RPGs for the Class I area. The RPOs have provided forums for significant interstate consultation, but additional consultations between states may be required to address

interstate visibility issues sufficiently.

States should consider all types of anthropogenic sources of visibility impairment in developing their LTS, including stationary, minor, mobile, and area sources. At a minimum, states must describe how each of the following seven factors listed below are taken into account in developing their LTS. The seven factors are: (1) emission reductions due to ongoing air pollution control programs, including measures to address RAVI; (2) measures to mitigate the impacts of construction activities; (3) emissions limitations and schedules for compliance to achieve the RPG; (4) source retirement and replacement schedules; (5) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes; (6) enforceability of emissions limitations and control measures; and (7) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the LTS. 40 CFR 51.308(d)(3)(v).

E. Coordinating Regional Haze and RAVI LTS

EPA revised 40 CFR 51.306(c), which is a part of the RHR, regarding the LTS for RAVI. The RAVI plan must provide for a periodic review and SIP revision not less frequently than every three years until the date of submission of the state's first

plan addressing regional haze visibility impairment in accordance with 40 CFR 51.308(b) and (c). The state must revise its plan to provide for review and revision of a coordinated LTS for addressing RAVI and regional haze on or before this date. It must also submit the first such coordinated LTS with its first regional haze SIP. Future coordinated LTSs and periodic progress reports evaluating progress towards RPGs must be submitted consistent with the schedule for SIP submission and periodic progress reports set forth in 40 CFR 51.308(f) and 51.308(g), respectively. The periodic review of a state's LTS must be submitted to EPA as a SIP revision and report on both RAVI and regional haze impairment. In cases involving sources newly certified as RAVI sources, 40 CFR 51.306(c) provides for the State to revise its plan as appropriate within 3 years of receipt of the RAVI certification.

F. Monitoring Strategy and Other Implementation Plan Requirements

Section 51.308(d)(4) of the RHR includes the requirement for a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the state. The strategy must be coordinated with the monitoring strategy required in section 51.305 for RAVI. Compliance with this requirement may be met through participation in the IMPROVE

network, meaning that the state reviews and uses monitoring data from the network. The monitoring strategy must also provide for additional monitoring sites if the IMPROVE network is not sufficient to determine whether RPGs will be met. The monitoring strategy is due with the first regional haze SIP and it must be reviewed every five years.

The SIP must also provide for the following:

- Procedures for using monitoring data and other information in a state with mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas both within and outside the state;
- Procedures for using monitoring data and other information in a state with no mandatory Class I areas to determine the contribution of emissions from within the state to regional haze visibility impairment at Class I areas in other states;
- Reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state, to be submitted in electronic format, if available;
- A statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area. The inventory

must include emissions for a baseline year, emissions for the most recent year with available data, and future projected emissions. A state must also make a commitment to update the inventory periodically; and

- Other elements including reporting, recordkeeping, and other measures necessary to assess and report on visibility.

The RHR requires control strategies to cover an initial implementation period extending to the year 2018 with a comprehensive reassessment and revision of those strategies, as appropriate, every 10 years thereafter. Periodic SIP revisions must meet the core requirements of section 51.308(d) with the exception of BART. The requirement to evaluate sources for BART applies only to the first regional haze SIP. Facilities subject to BART must continue to comply with the BART provisions of section 51.308(e), as noted above. Periodic SIP revisions will assure that the statutory requirement of reasonable progress will continue to be met.

G. Consultation with States and FLMS

The RHR requires that states consult with FLMS before adopting and submitting their SIPs. 40 CFR 51.308(i). States must provide FLMS an opportunity for in person consultation at least 60 days prior to holding any public hearing on the SIP. This consultation must include the opportunity for the FLMS to discuss

their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

IV. What is EPA's Analysis of Minnesota's Regional Haze Plan?

Minnesota submitted its regional haze plan on December 30, 2009, which included revisions to the Minnesota SIP to address regional haze. Minnesota also supplemented its regional haze plan by submitting additional material on January 5, 2012.

A. Class I Areas

States are required to address regional haze affecting Class I areas within a state and in Class I areas outside the state that may be affected by the state's emissions. 40 CFR 51.308(d). Minnesota has two Class I areas, Boundary Waters Canoe Wilderness Area (Boundary Waters) and Voyageurs National Park (Voyageurs), within the state. Minnesota is responsible for developing a

regional haze plan that addresses these Class I areas and for consulting with states that affect its areas.

Minnesota reviewed technical analyses conducted by CENRAP and other RPOs to determine what Class I areas outside the state are affected by Minnesota emission sources. Minnesota's modeling shows that its emissions contribute to visibility impairment at Isle Royale National Park in Michigan. Minnesota emission sources were also found by the CENRAP analysis to contribute to visibility impairment at Wichita Mountains Wildlife Refuge in Oklahoma. Minnesota has met the requirement to identify affected Class I areas.

B. Baseline, Current, and Natural Conditions

The RHR requires Class I states to calculate the baseline, current, and natural conditions for their Class I areas.

Natural background visibility is estimated by calculating the expected light extinction using estimates of natural concentrations of pollutants adjusted by an estimate of humidity. The IMPROVE algorithm is used to make this calculation. EPA allows states to use an alternative approach to calculating natural conditions. One alternative approach is to use the refined IMPROVE algorithm, which is what Minnesota chose to do. Minnesota determined that natural visibility conditions for Boundary Waters are best represented by an average of 11.6 dv for the 20% most impaired days and 3.4 dv for the 20% least impaired

days. Natural conditions for Voyageurs were predicted to be 12.2 dv on the most impaired days and 4.3 dv on the least impaired days.

The baseline visibility conditions are the same as the current conditions for this initial regional haze implementation period. Minnesota used IMPROVE monitoring data to calculate the baseline visibility conditions at its Class I areas. Data from 2000-2004 was used to calculate the impairment on the 20% best and 20% worst visibility days at Boundary Waters and Voyageurs. The refined IMPROVE equation is used to calculate the baseline conditions.

Minnesota calculated the baseline visibility impairment at Boundary Waters as 19.9 dv on the 20% most impaired days and 6.4 dv on the 20% least impaired days. The state found the baseline visibility impairment at Voyageurs to be 19.5 dv on the 20% worst visibility days and 7.1 dv on the cleanest 20% of days.

Minnesota compared the baseline or current to the natural visibility impairment. This determines the visibility improvement needed over the 60-year period (2004 to 2064) to reach natural conditions. An annual rate can simply be calculated by dividing the needed improvement by 60 years. The state can use the annual visibility improvement rate for the most impaired days to set its uniform rate of progress (URP) targets for each implementation period.

For Boundary Waters, the difference between the baseline, 19.9 dv, and the natural, 11.6 dv, on the 20% most impaired days is 8.3 dv, which yields an annual rate of 0.14 dv. The difference on the 20% least impaired days between the 6.4 dv baseline and 3.4 dv natural conditions is 3.0 dv. The differences at Voyageurs are 7.3 dv on the most impaired days (19.5-12.2 dv) and 2.8 dv (7.1-4.3 dv) on the least impaired days. The annual rate of visibility improvement needed for the 20% most impaired days is 0.12 dv per year to achieve the URP. Minnesota then calculated the 2018 URP goals of 17.9 dv for Boundary Waters and 17.8 dv for Voyageurs. These goals for the 20% most impaired days were calculated by multiplying the annual rate of improvement by the 14 years since the 2004 baseline. There is to be no degradation of the visibility on 20% best days, so no calculation is needed as the 2018 goals match the baseline. EPA's Reasonable Progress Guidance states that the URP is not a presumptive target for the RPG. Class I states can set the RPG at the URP or it can set the RPG at greater or less visibility impairment.

C. RPGs

Minnesota teamed with MRPO and Michigan to establish RPGs for the four Northern Class I areas including Boundary Waters and Voyageurs. The Northern Class I areas consultation group worked together to determine the RPGs by first identifying and

prioritizing sources that contribute to the worst visibility days and to establish the relative visibility impairment affects. The group determined that the priority emission sources are SO₂ point sources, NO_x from both point and mobile sources, and ammonia from agricultural operations. Minnesota identified regional SO₂ emissions from EGUs as a key contributor to visibility impairment in Boundary Waters and Voyageurs. Minnesota also identified NO_x and SO₂ emissions from sources in the six counties of Northeastern Minnesota as important contributors. The counties of Carlton, Cook, Itasca, Koochiching, Lake, and Saint Louis comprise the Northeast Minnesota area.

The second step of the process was to identify control options for the priority sources. The group identified existing control measures including CAIR, BART, Maximum Achievable Control Technology standards, on-road mobile source programs, and non-road mobile source programs. MRPO examined different potential control scenarios, two control levels for EGUs and two control levels for industrial, commercial, and institutional (ICI) boilers. Minnesota determined that most of its priority sources, including EGUs and indurating furnaces at taconite facilities, are subject to BART. Other priority sources will be subject to emissions control to comply with the Northeast Minnesota plan (see section IV.E).

The third step of the process is to assess existing control programs. In its initial plan development, Minnesota considered reductions from CAIR. Subsequently, CAIR was suspended in Minnesota, but then EPA promulgated the Transport Rule to regulate EGU emissions in Minnesota again. Therefore, Minnesota's plan continues to include EGU emission reductions that once again may be considered mandated by a regional trading program. The state is also accounting for emission reductions from voluntary projects being undertaken by EGUs due to Minnesota statute 216B.1692, which allows the recovery of the costs of environmental projects. Minnesota further considered the emission reductions from implementing BART controls on its sources and sources in other states. Minnesota took into account the reductions anticipated from other federal controls such as Tier II mobile source standards, heavy-duty diesel engine standards, low sulfur fuel, and non-road mobile source control programs.

The fourth step is to determine which control options may be reasonable. The Northern Class I areas group further considered the MRPO EGU scenario with 0.15 lb SO₂/MMBTU and 0.10 lb NO_x/MMBTU limits by 2013 and the ICI boiler option with a 40% reduction in SO₂ emissions and a 60% reduction in NO_x emissions by 2013. Minnesota used a CENRAP emissions-to-distance analysis. CENRAP took source emissions in tons divided by the distance to

an affected Class I area in kilometers. When this ratio was greater than or equal to five, potential controls were evaluated. This analysis identified some Minnesota sources with potential for cost effective NO_x reductions. However, Minnesota noted that the identified sources are already implementing controls.

The final step of the process to determine the RPGs was to compare the control strategies to the URP. Minnesota included all control measures believed to be reasonable and compared the resulting visibility improvement to the URP. Minnesota set the RPGs for Boundary Waters at 18.6 dv for the worst 20% of days and 6.4 dv for the best 20% of days in 2018. This annual 0.09 dv improvement rate would lead to achieving natural conditions on the worst 20% of days in 2093. The 2018 RPG for Boundary Waters provides less improvement than the linear progress benchmark of 17.9 dv. Minnesota determined that the RPGs for Voyageurs are 18.9 dv for the worst 20% of days and 7.1 dv for the best 20% of days in 2018. Projecting this 0.04 dv per year improvement into the future yields Voyageurs reaching natural conditions on the worst 20% of days in 2177. As was the case for Boundary Waters, the 2018 RPG for Voyageurs provides less improvement than the linear progress benchmark of 17.8 dv. Minnesota considers the RPGs to be the result of the minimally acceptable visibility improvement. Minnesota detailed potential controls in Chapter 10 of its regional haze plan.

Minnesota consulted with other states to determine which Class I areas are impaired by emissions from its sources. The consultation also allowed Minnesota to determine that in addition to contributions from its own sources, emissions from sources in Wisconsin, Illinois, Iowa, Missouri, and North Dakota contribute to visibility impairment at Minnesota's Class I areas, Boundary Waters and Voyageurs. Minnesota identified the contributing states from MPRO's 2018 PSAT analysis. Other analyses from CENRAP and MRPO support the contribution determination. The pollutants and sources affecting Boundary Waters and Voyageurs are detailed in Chapter 10 of the Minnesota regional haze plan.

Minnesota consulted with the FLMS during the development of its regional haze plan. The FLMS participated in CENRAP and on Northern Class I areas group calls, which allowed for FLM comment about technical issues and control strategies. Minnesota also consulted directly with the FLMS during plan development about its visibility impairment at Class I areas assessment, setting the RPGs, and the development of strategies to address visibility impairment.

The FLMS participated at stakeholder meetings in January and May 2007. Consultation with the FLMS continued as Minnesota prepared its BART determinations. Further consultation occurred in the summer of 2007 while Minnesota cultivated a strategy to address visibility impairment resulting from emission sources in

close proximity to the Class I areas. A draft of the regional haze plan was discussed at a September 20 and 21, 2007, meeting at Voyageurs. Minnesota sent the FLMS its regional haze plan on February 4, 2008. The public hearing on the regional haze plan was held on April 10, 2008. Thus, the state met the provisions of the RHR to provide the FLMS at least 60 days to review the plan prior to the public hearing. Minnesota will continue to consult with the FLMS on regional haze in the future.

Minnesota actively participated in CENRAP meetings and conference calls. Minnesota also participated in some MRPO meetings and conference calls even though it is not a MRPO member. Beyond the technical analyses produced by the RPOs, Minnesota was able to consult with states and tribes throughout the region because of its RPO participation. Minnesota and Michigan coordinated the Northern Class I areas conference calls, which allowed the states to consult with the states contributing to visibility impairment at Boundary Waters, Voyageurs, and two Class I areas in Michigan's Upper Peninsula. Illinois, Indiana, Iowa, Missouri, and North Dakota participated on the Northern Class I areas calls and thus, consulted with Minnesota. Michigan and Minnesota also consulted with each other. The Northern Class I areas consultation group also included a number of other governmental entities. Participating tribes included the Leech Lake Band of Ojibwe, Mille Lacs Band of Ojibwe, Fond du Lac Band

of Lake Superior Chippewa, Grand Portage Band of Chippewa, Upper Sioux, Lower Sioux, and Huron Potawatomi. EPA, National Park Service, and Forest Service also participated in the consultation calls along the Ontario Ministry of the Environment. The Northern Class I areas consultation group began in 2004 by working on air quality planning. Later the group discussed the SIP requirements of the regional haze program including sharing technical information on regular conference calls from July 2006 to February 2008. In September 2007, Minnesota sent a letter to the states participating in the Northern Class I areas group as these states contribute to visibility impairment in Boundary Waters or Voyageurs. This letter formally acknowledged the consultation occurring in the group. Details of consultations including the Northern Class I areas process are included in Chapter 3 of the Minnesota regional haze plan.

In addition to demonstrating the effect of emissions from other states on its Class I areas, Minnesota must also show that it will obtain its share of emission reductions from its sources. Thus, Minnesota's emission reduction obligations will allow the affected Class I areas to meet the RPGs. Minnesota performed technical analyses and modeling to analyze its contribution to visibility impairment. The state concluded that sulfates, nitrates, and organic carbon are the main contributors to visibility impairment. Minnesota thus decided to focus emission

reduction efforts on SO₂ and NO_x, as it found the organic particles tend to come from natural sources such as wildfires in the Upper Midwest. Minnesota considered the emission reductions expected from existing, voluntary projects, and additional control measures that will improve visibility through 2018, when the first RPGs apply. The existing and voluntary control measures considered are similar to what the state considered in setting its RPGs. The additional controls measures were considered by the Northern Class I areas group and are reasonably likely to be implemented. Minnesota believes that the control measures it considered are reasonable and that it will achieve its share of emission reductions to attain the RPGs at affected Class I areas. This includes obtaining its share of emission reduction for Boundary Waters and Voyageurs in addition to Class I areas outside the state. EPA concludes that Minnesota is implementing a reasonable progress plan that includes the measures that meet the criteria as reasonable measures.

D. BART

Minnesota conducted a BART analysis using the criteria in the BART Guidance at 40 CFR 51.308(e) and Appendix Y to identify all of the BART-eligible sources, assess whether the BART-eligible sources are subject to BART, and determine the BART controls. Minnesota initially identified 25 facilities with BART-eligible sources consisting of 11 EGUs, 2 petroleum

refineries, 6 taconite ore processing plants, 2 sugar-processing facilities, 2 kraft pulp mills, an iron and steel mill, and a secondary metal production facility. Minnesota performed source-specific analyses with the CALPUFF model to determine which units are subject to BART. The state selected a 98th percentile 0.5 dv contribution threshold, consistent with EPA's suggested threshold, because no conglomeration of sources existed to warrant a more stringent threshold and because Minnesota concluded that 0.5 dv was an appropriate threshold for defining significant impact for BART purposes. Minnesota found that 11 facilities have units subject to BART. Five EGUs and six taconite ore processing facilities have subject to BART units. The EGUs with subject to BART units include Minnesota Power Taconite Harbor and Boswell facilities, Northshore Mining's Silver Bay, Rochester Public Utilities' Silver Lake, and Xcel Energy's Sherburne County (Sherco). The taconite ore processing facilities with subject to BART units are US Steel- Keewatin Taconite, Hibbing Taconite Company, US Steel- Minntac, United Taconite, ArcelorMittal, and Northshore Mining's Silver Bay.

Next, Minnesota determined the appropriate BART emission limits using the five-step BART determination process. The taconite facilities are unique, as only eight facilities exist nationally with six in northern Minnesota and two in Michigan's Upper Peninsula. The taconite plants are over 30 years old. The

lack of new plants or retrofit projects gave Minnesota little knowledge of what emission limits are feasible and the cost effectiveness of potential control technologies, particularly for NO_x control.

Minnesota determined BART for NO_x emissions from taconite pellet furnaces as employing good combustion practices with process modifications such as low-NO_x burners, ported kilns, and fuel-efficient furnace design improvements. Minnesota required emission monitoring at the taconite facilities to learn what NO_x emission rates can be achieved by these controls. Now, the state has used that data to set the NO_x emission rates for its taconite facilities.

The facility specific BART determinations resulted in Minnesota selecting the following NO_x emission limits as satisfying BART. All NO_x emission limits for the taconite facilities are based on a 30-day rolling average. The ArcelorMittal indurating furnace will use low-NO_x burners and a furnace energy-efficiency project to reduce emissions to 1018 lb/hr. For Hibbing Taconite, the furnace energy-efficiency projects completed in 2005 and 2006 to produce a NO_x BART limit of 447.4 lb/hr on the Line 1 Pelletizing Furnace, 571.7 lb/hr on the Line 2 furnace, and 338.3 lb/hr on the Line 3 furnace. Keewatin Taconite's Phase II Pelletizing Furnace will use fuel blending along with the existing controls to reduce NO_x emissions

to 12.35 tons per day. US Steel- Minntac will use fuel blending on its pellet furnace Line 3 to achieve an emissions rate of 7.85 tons per day. Minntac will use low-NO_x burners and fuel blending on Lines 4, 5, 6, and 7. The resulting NO_x emission limits are 9.85 tons per day on Line 4, 9.46 tons per day on Line 5, 7.14 tons per day on Line 6, and 5.51 tons per day on Line 7.

Northshore Silver Bay requires good combustion practices to limit NO_x emissions from Furnace 11 and Furnace 12 to 115.5 lb/hr for each furnace, while Process Boilers #1 and #2 are limited to 0.17 lb/MMBTU. Finally, United Taconite is required to operate with good combustion practices to obtain a NO_x emission limit of 4.5 tons per day on Line 1 and 10.1 tons per day on Line 2.

Minnesota determined that BART for PM emissions is complying with the taconite MACT for covered units. The taconite MACT establishes a PM₁₀ emission limit of 0.01 grains per dry standard cubic foot for the pellet furnaces at all six taconite facilities. The taconite facilities already have PM controls to comply with the MACT standards. Northshore Silver Bay has wet-wall electrostatic precipitators, while the other five facilities operate wet scrubbers for PM control. Minnesota concluded that additional PM control would result in nominal visibility improvement, so complying with the taconite MACT represents BART control for PM.

Minnesota determined that the wet scrubbers installed for PM control could be used to provide BART control of SO₂ emissions at most of the taconite facilities, too. As with NO_x emission control, Minnesota found it necessary to monitor SO₂ emissions to be able to select the appropriate SO₂ emission limits for some of the facilities.

Minnesota set the SO₂ emission limit for the indurating furnace at ArcelorMittal at 0.165 lb/long ton (LT) of taconite pellets fired on a rolling 30-day average when combusting natural gas. The SO₂ emission limits for Hibbing Taconite's Line 1, 2, and 3 Pelletizing Furnaces each were set at 0.207 lb/LT as a 30-day rolling average. Minnesota determined that Keewatin Taconite is obtaining adequate SO₂ control with its wet scrubbers. Thus, after reviewing the monitoring data, the State set an SO₂ emission limit at 2.71 tons per day on a 30-day rolling average for the facility's Phase II Pelletizing Furnace. US Steel-Minntac operates five agglomerator lines - Lines 3 to 7. Minnesota set the SO₂ BART emission limit for Line 3 at 1.28 tons per day, Line 4 at 1.10 tons per day, and Line 5 at 1.10 tons per day. Lines 6 and 7 operate with ported kilns and combust coal in making fluxed pellets, so Minnesota needed additional monitoring data to set the SO₂ emission limits for Lines 6 and 7 at 1.47 and 1.61 tons per day respectively. The SO₂ emission limits for US Steel-Minntac are for a rolling 30-day average. For the

indurating furnaces at Northshore Silver Bay, Minnesota set a BART limit for SO₂ emissions at 0.0651 lb/LT on a 30-day rolling average. United Taconite has two indurating furnaces, Lines 1 and 2. Minnesota determined that optimizing the wet scrubber for SO₂ removal is BART control for Line 1 and set the SO₂ emission limit at 106.3 tons as a 30-day rolling sum. Minnesota determined the SO₂ emission limit for Line 2 is 197 tons as a 30-day rolling sum. United Taconite can meet the BART emission limit by either modifying its fuel blends, through operation of additional control equipment, or a combination of additional control with a lower sulfur fuel blend. Line 2 currently uses a blend of coal, petroleum coke, and natural gas. The BART analysis showed the installation and operation of a polishing scrubber as a viable BART control.

Minnesota has provided some of the preceding BART emission limits on January 5, 2012 in proposed Administrative Orders. EPA cannot approve BART emission limits that are not federally enforceable. Thus, EPA cannot approve all of Minnesota's BART emission limits until the limits are final in an enforceable form. Nevertheless, Minnesota has requested that EPA conduct "parallel processing," in which EPA proposes the action it would take were the State to adopt its draft administrative orders in final form. Accordingly, EPA is proposing that, provided Minnesota submits all of its BART emission limits in final

Administrative Orders by the time EPA conducts final rulemaking, EPA will approve these administrative orders as satisfying BART for these sources.

Minnesota initially did not perform BART determinations for the five subject to BART EGUs. This was because Minnesota was in the CAIR region and the state planned to meet its BART obligations through its participation in CAIR. CAIR was expected to control NO_x and SO₂ emissions from power plants, so Minnesota assessed the visibility impairment from PM for the subject to BART EGUs. Minnesota modeled each EGU and found the visibility impairment to be minor with the maximum impact of 0.16 dv from Northshore Silver Bay. Minnesota did not set PM emission limits for BART given this minor impact on visibility.

Minnesota prepared BART determinations for NO_x and SO₂ emission control from its subject EGUs after CAIR was suspended for Minnesota. The BART determinations for the five subject to BART EGUs were included in the December 30, 2009, submission.

EPA has analyzed the benefits of the Transport Rule in relation to the benefits of BART on EGUs that are subject to the Transport Rule. On December 30, 2011 (76 FR 82219), EPA proposed a rule finding that the Transport Rule is more beneficial in mitigating visibility impairment than application of BART to the affected EGUs on a source-specific basis. If the proposal is finalized, the Transport Rule may be considered to satisfy the

requirement for BART for EGUs in Minnesota for SO₂ and NO_x. Minnesota requested on January 5, 2012 to use Transport Rule participation to satisfy BART for its EGUs. As set forth in the proposed rule, Transport Rule region states are able to use participation in the Transport Rule program as an alternative to implementing source specific BART on each subject EGU. EPA proposes to approve Minnesota's reliance on the already promulgated Transport Rule FIP for EGU sources in Minnesota as an alternative to BART for SO₂ and NO_x for its EGUs. Therefore, EPA is proposing that if EPA finalizes the rule finding that the Transport Rule satisfies the BART requirement for EGUs for SO₂ and NO_x in Minnesota and elsewhere, then the combination of the Minnesota submission including BART for its taconite facilities and the Transport Rule will satisfy applicable requirements for BART.

A RAVI petition was submitted to the FLMs on September 3, 2009. The US Department of Interior certified that a portion of the visibility impairment in Isle Royale National Park and Voyageurs National Park are caused by emissions from Sherco. Interior certified the petition on October 21, 2009. The RAVI rules at 40 CFR 51.302(c) require the determination of emission limits representing BART for certified facilities. A BART determination under the RAVI is similar to, but independent from the BART determination made under the RHR. EPA views Minnesota's

submittal as addressing regional haze as regulated under 40 CFR 51.308 and not RAVI as regulated under 40 CFR 51.302 to 51.306. Therefore, this proposed rule only addresses satisfaction of regional haze requirements and does not address whether Minnesota's plan addresses requirements that apply as a result of the certification of Sherco as a RAVI source. EPA will act on RAVI BART in a separate notice.

E. LTS

Under Section 169A(b)(2) of the CAA and 40 CFR 51.308(d), states' regional haze programs must include a LTS for making reasonable progress toward meeting the national visibility goal. Section 51.308(d)(3) requires that Minnesota consult with the affected states in order to develop a coordinated emission management strategy. Minnesota must demonstrate that it has included, in its SIP, all measures necessary to obtain its share of the emissions reductions needed to meet the RPGs for the affected Class I areas. This includes Boundary Waters, Voyageurs, and Class I areas in other states that are affected by Minnesota sources. As described in section III.E., the LTS is the compilation of all control measures Minnesota will use to meet applicable RPGs. The LTS must include enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the RPGs for all affected Class I areas.

At 40 CFR 51.308(d)(3)(v), the RHR identifies seven factors that a state must consider in developing its LTS: (A) emission reductions due to ongoing programs, (B) measures to mitigate impact from construction, (C) emission limits to achieve the RPG, (D) replacement and retirement of sources, (E) smoke management techniques, (F) federally enforceable emission limits and control measures, and (G) the net effect on visibility due to projected emission changes over the LTS period. Minnesota considered the seven factors in developing its LTS.

Minnesota considered these ongoing and expected programs in developing its LTS: CAIR; voluntary EGU projects due to Minnesota statute 216B.1692; BART; Tier II mobile source standards; heavy-duty diesel engine standards; low sulfur fuel; non-road mobile source control programs; and measures taken to attain the NAAQS.

When Minnesota's participation in the CAIR program was suspended, Minnesota began a process of working with its BART-eligible EGU sources to make BART determinations and put in place BART emission limits in the form of source-specific permits, taking into consideration the emission control projects that these sources had initiated in anticipation of being subject to CAIR and voluntary emission reduction projects that had been encouraged by Minnesota's 216B.1692 statute that provides rate recovery for investments in pollution control. After EPA promulgated the Transport Rule and made known its plans to

propose a rule that would allow Minnesota to rely on the Transport Rule to satisfy the BART requirements for SO₂ and NO_x for its EGUs, Minnesota changed course and is now requesting EPA approval for such reliance, as stated above, rather than seeking EPA approval of its source-specific SO₂ and NO_x emission limits as BART for BART-eligible EGUs. Nevertheless, Minnesota expects reductions from Minnesota Power - Boswell, Minnesota Power - Laskin, Minnesota Power - Taconite Harbor, Ottertail Power - Hoot Lake, Rochester Public Utilities - Silver Lake, Xcel Energy - Allen S. King, Xcel Energy - High Bridge, Xcel Energy - Riverside, Xcel Energy - Sherburne County because permits requiring emission reductions have been issued for these sources as a result of either the BART determination process or the voluntary emission reduction program. These reductions are part of Minnesota's LTS.

Other states that contribute to visibility impairment at Boundary Waters and Voyageurs must also reduce emissions from their BART sources. Minnesota incorporated the expected emission reductions due to BART in other states into its modeling. Additional emission reductions are expected from federal programs and from contributing states to attain the PM_{2.5} and ozone NAAQS. Minnesota is in attainment of these NAAQS.

Minnesota has addressed the requirement to consider measures to mitigate the impacts of construction activities through the

general and transportation conformity measures that are included in the Minnesota SIP. Minnesota also has Minnesota Rule 7011.0150 that requires measures to prevent particulate matter from becoming airborne included in its SIP.

The state is required to investigate if additional reasonable control strategies are available to help meet the visibility goal. As a result of its analysis of potential controls, Minnesota developed the Northeast Minnesota plan for emission reductions. The Northeastern portion of Minnesota contains the two Class I areas and a number of industrial sources. The sources include taconite facilities that mine and process a variety iron ore, which is an industry that is expected to expand in the future. The plan gives large sources in Carlton, Cook, Itasca, Koochiching, Lake, and Saint Louis Counties region-wide emission reduction targets for 2018. Large sources are point sources in the region that emitted more than 100 TPY of either SO₂ or NO_x in 2002, the base line year. A list of these large sources is in Chapter 10 of the Minnesota regional haze plan. Newer sources that have a potential to emit more than 100 TPY of either pollutant are also included in the Northeast Minnesota plan. Minnesota focused on the emissions it can control. Minnesota divided the light extinction at Voyageurs into the difference pollutants based on their contribution. The state then removed the influence of natural pollutants and those

beyond its control. Minnesota determined that it needed to control SO₂ and NO_x in the region and that a 28% reduction is needed to meet the URP. Thus, the 2018 target was set at a 30% reduction in combined SO₂ and NO_x emission from Northeast Minnesota by 2018 with an intermediate target of a 20% reduction by 2012. The combined SO₂ and NO_x emissions were 95,562 TPY in 2002, so a 30% reduction makes the 2018 goal 66,894 TPY combined. Note that the Northeast Minnesota plan does not mandate emission reductions, but sets a region-wide emissions goal for the state to consider when setting emission limits to regional sources.

Minnesota also included requirements in the Administrative Orders for the taconite facilities to demonstrate attainment for recently enacted NAAQS for SO₂ and NO_x. Each facility must provide Minnesota with modeling demonstrating compliance with the one-hour SO₂ and NO_x standards, the emission limits that will result in compliance, the controls or work practices needed to meet the emission limits, and an implementation schedule. The taconite facilities are to comply with the emission limits by June 30, 2017. Minnesota expects the requirements of the taconite facilities to result in indentifying emission control technologies that work well on their facilities.

The visibility impacts of new major sources will be mitigated using the existing New Source Review (NSR) and Prevention of Significant Deterioration (PSD) programs. The PSD

program requires sources to install stringent emission controls. New and modified sources need to consider the potential affect on visibility in Class I areas under the NSR and PSD programs. The region-wide emission targets in the Northeast Minnesota plan will aid the state in considering visibility impairment.

Minnesota followed the requirement to consider source retirement and replacement schedules in developing the RPGs for its Class I areas. Minnesota has also developed a Smoke Management Plan that EPA certified October 27, 2004. The Minnesota Smoke Management Plan allows the state to meet the obligation to consider smoke management during the LTS development. Agricultural and silvicultural burning under the Minnesota Smoke Management Plan will limit the affects of the smoke on air quality including on visibility. A properly managed fire under the right meteorological conditions will help to protect public safety and will prevent deterioration of air quality.

Minnesota must also make sure that the emission limits and control measures it is using to meet the RPGs are federally enforceable. Minnesota included its state rules in the regional haze plan. It also included Administrative Orders and permits. Other rules that Minnesota is relying on are already approved into the Minnesota SIP. EPA believes that control measures and

emission limits will be federally enforceable upon final approval of the Minnesota regional haze plan.

F. Monitoring Strategy

The RHR requires a monitoring strategy for measuring, speciation, and reporting on visibility impairment that is representative of all mandatory Class I areas in the state. Minnesota participates in the IMPROVE network. IMPROVE monitors operate in both Boundary Waters and Voyageurs. There are also IMPROVE protocol sites at Blue Mounds and Great River Bluffs in the southern portion of Minnesota. IMPROVE protocol sites follow the same monitoring protocol as IMPROVE site, but located outside mandatory Class I areas. Minnesota commits to reporting visibility data annually for its two Class I area. There are 10 IMPROVE sites and 15 IMPROVE protocol sites within the CENRAP region.

Minnesota also operates a monitoring network that provides data to analyze air quality problems including regional haze. The monitoring network includes Federal Reference Method, continuous, and speciation monitors. The speciation monitors that gather data on fine particulate composition includes the IMPROVE monitors along with two additional speciation sites in Minneapolis and Rochester. EPA finds that Minnesota's regional haze plan meets the monitoring requirements for the RHR and that Minnesota's network of monitoring sites is satisfactory to

measure air quality in its Class I areas and assess its contribution to regional haze.

G. Comments

Minnesota offered the public an opportunity to comment on its proposed regional haze plan. Minnesota gave notice of a comment period on February 25, 2008, that lasted until May 16, 2008. Minnesota held a public meeting on April 10, 2008. An additional comment period was given from July 20, 2009, to September 3, 2009 for revised portions of the plan.

Minnesota included the original comment letters in its plan. The state also provided its responses to the comments. Minnesota made revisions to its proposed plans following the initial comment period. The revised portions of the plan included source-specific BART for EGUs (an element that Minnesota has now indicated that it will replace with reliance on the Transport Rule as an EPA-approved alternative to EGU BART), BART for taconite facilities, and its LTS. Minnesota provided the second comment period to receive public comment on the revised plan. Minnesota is taking public comment from December 19, 2011 to February 3, 2012. Minnesota will also take public comment at the March 27, 2012 Citizens' Board meeting. Minnesota has satisfied the requirements from 40 CFR Part 51, Appendix V to provide evidence that it gave public notice, took comment, and that it compiled and responded to comments.

V. What Action is EPA Taking?

EPA is proposing action on a regional haze plan that Minnesota submitted on December 30, 2009, and supplemented on January 5, 2012. EPA is proposing to approve Minnesota's State Implementation Plan addressing regional haze for the first implementation period, provided it adopts and submits administrative orders consistent with its recent proposal of administrative orders. Full approval of the BART emission limits for the five EGUs is contingent on EPA's finalization of the rule, proposed on December 30, 2011, finding that the Transport Rule provides greater visibility improvement than implementing BART.

VI. Statutory and Executive Order Reviews.

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely approves state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- is not a "significant regulatory action" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: January 17, 2012.

Susan Hedman,
Regional Administrator, Region 5.